



GEOGRAPHIC INFORMATION SYSTEM (GIS) TECHNICIAN+/GEOGRAPHIC INFORMATION SYSTEM (GIS) ANALYST+

Purpose:

To actively support and uphold the City's stated mission and values. To perform a variety of routine and complex technical GIS (Geographic Information System) and IT duties involved in the management, production, distribution, training, and data and application support of the City GIS database.

Distinguishing Characteristics:

GIS Technician

The GIS Technician is the entry-level class within the series. This class is distinguished from the GIS Analyst by the performance of more routine tasks and duties assigned to positions within the series related to City GIS data production and maintaining an efficient GIS mapping and data management operation.

GIS Analyst

The GIS Analyst is the full journey level class within the series. Employees within this class are distinguished from the GIS Technician by the performance of the full range of City GIS data production, support, training and related specialized duties as assigned including more complex, long term, and interdepartmental work assignments. Employees at this level receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of the work unit.

Positions in these classes are flexibly staffed. Advancement to the GIS Analyst level requires that the employee be satisfactorily performing the full range of duties at the journey level, and that the employee meets the minimum requirements. Note that for existing employees, advancement to the GIS Analyst class, GISP Certification, or appropriate equivalent may substitute for one year of experience.

Supervision Received and Exercised:

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Receives general supervision from the Engineering GIS Supervisor or from other supervisory or management staff.

May exercise functional and technical supervision over lower level and temporary staff.

Examples of Duties:

This class specification is intended to indicate the basic nature of positions allocated to the class and examples of typical duties that may be assigned. It does not imply that all positions within the class perform all of the duties listed, nor does it necessarily list all possible duties that may be assigned.

Duties may include, but are not limited to, the following:

- Maintain and update City GIS master database of landbase, utility, infrastructure, city-wide control, and custom digital maps and data, digital aerals, and other associated databases utilizing GIS data editing and maintenance applications, CAD (computer aided design) editing applications, internet/intranet web applications, and other computer software.
- Ensure spatial accuracy and data quality of geospatial and attribute data encoding to the City GIS database; performs high accuracy geospatial mapping by COGO (coordinate geometry) mapping techniques, links attributes to geospatial objects, and edits attribute database.
- Research, interpret and analyze a variety of civil engineering and real estate records to update the City GIS database including legal descriptions, civil engineering plans, blueprints, as-builts, aerals, field checks, work orders, address reports, and other engineering office files.
- Research, access, and utilize permit and property management system, engineering document management system, web-based parcel management systems, and other IT and GIS databases.
- Provide City GIS database information and data for use by the public, other City departments, and outside agencies including architects, engineers, land surveyors, developers, designers, planners, appraisers, utility companies, other municipalities, and federal, state, and county governments.
- Provide civil engineering design/drafting GIS support for civil engineering projects.
- Operate GIS/CAD workstation to update City GIS database as new data is received on new subdivisions, developments, capital improvement projects;

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update spatial and attribute database information from as-built records, implement computer plotting as required; maintain backups and other computer operating system, file system, and application issues.

- Perform complex, intensive, long term, and departmental GIS and digital mapping tasks on standing, specialized, and custom GIS, IT, and digital mapping projects and programs for internal and external customers.
- Provide specialized and custom GIS and digital maps, GIS data extractions, digital imagery, and specialized plotting capabilities for internal and external customers using GIS, CAD, digital image editing and other software.
- Assist in quality control, quality assurance, and system maintenance processes in the GIS data production routines including the processing of completed GIS map updates, commit updates to master repository, initiate off-hours batch processes, startup and shutdown of production PC's, workstations, and servers, and check work of temporary workers and contracted data products.
- Assist in large-scale corrective processes of the City GIS database and related digital mapping and data documents, including research and verification from source documents.
- Takes part in the development, coordination, and maintenance of policies and procedures regarding City GIS data management.
- Perform related duties as assigned.

GIS Analyst

In addition to the duties of GIS Technician:

- Provide GIS and IT assistance in the implementation, management, and support of the City GIS system; assist in development, coordination, testing, results analysis, installation, and support of active and test GIS and IT environments and related policies and procedures; evaluate and make recommendations to related software, hardware, and policies and procedures.
- Provide and assume responsibility for city-wide maintenance and support of City GIS related software, hardware, applications, printers, plotters, source code, data files, database system, operating system environment settings, and internet/intranet web data; coordinate related support with IT support work group.

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- Provide and assume responsibility for city-wide support and training in the usage and application of City GIS database information; develop and maintain training curricula, documentation, and training materials; coordinate related training with IT training work group.
- Develop and assume responsibility for specialized and custom GIS datasets, databases, layers, and coverages; write and maintain computer batch files, shell scripts, user commands, internet/intranet applications and pages, other programs, menus, and applications for GIS data management and data distribution.
- Provide GIS spatial and attribute data analysis, SQL database analysis, and create custom and complex GIS, digital mapping, digital imagery, and database data products, digital information, and hardcopy for internal and external customers.
- Operate as a work group liaison to other GIS, ITD, and non-GIS work groups for support, implementation, and coordination of GIS projects and tasks within the city and to other outside agencies as assigned.
- Write and maintain production, distribution, training, support, policies and procedures, and other GIS application and data documentation.
- Assist in providing production-specific direction, specialized training, work assignments, and quality control of work of interns, temporary, and other contracted or assigned personnel working on the City GIS database.

Experience and Training Guidelines:

Any combination of experience and training that would likely provide the required knowledge and abilities is qualifying. The hiring department may include job related experience, training or license and certification preferences at the time of recruitment. A typical way to obtain the knowledge and abilities would be:

Experience:

GIS Technician

One year of experience in GIS or CAD production mapping, or civil engineering design CAD drafting practices including experience in the interpretation and mapping of civil engineering and real estate records to a GIS database. Demonstrated experience with accessing and retrieving geospatial and attribute data, in addition to basic understanding of civil engineering practices, is also required.

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GIS Analyst

Three years of increasingly responsible and technical GIS and IT experience in City GIS production mapping practices and City GIS data and application management practices with emphasis in City GIS data and application distribution, analysis, reporting, support, programming, or maintenance at a departmental level.

Training:

GIS Technician

Equivalent to the completion of the twelfth grade, supplemented by course work from an accredited college or university in GIS, land surveying, computer science, civil engineering, CAD drafting, or a related field. An Associate's degree is desirable.

GIS Analyst

Equivalent to an Associate's degree from an accredited college or university with major course work in GIS, land surveying, computer science, civil engineering, CAD drafting, or a related field.

Licenses / Certifications:

GIS Analyst

Certification as a Certified GIS Professional (GISP) from the GIS Certification Institute (GISCI), Certified GIS/LIS Technologist from the American Society for Photogrammetry and Remote Sensing (ASPRS), or equivalent technical certification in GIS or geospatial technology is preferred.

This position is included in the City's classified service, pursuant to City of Tempe Personnel Rules and Regulations, Rule 1, Section 103.

Job Code: 6182/6183

FLSA: Non-Exempt